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GRADUATE SCHOOL CATALOG 1972-1973

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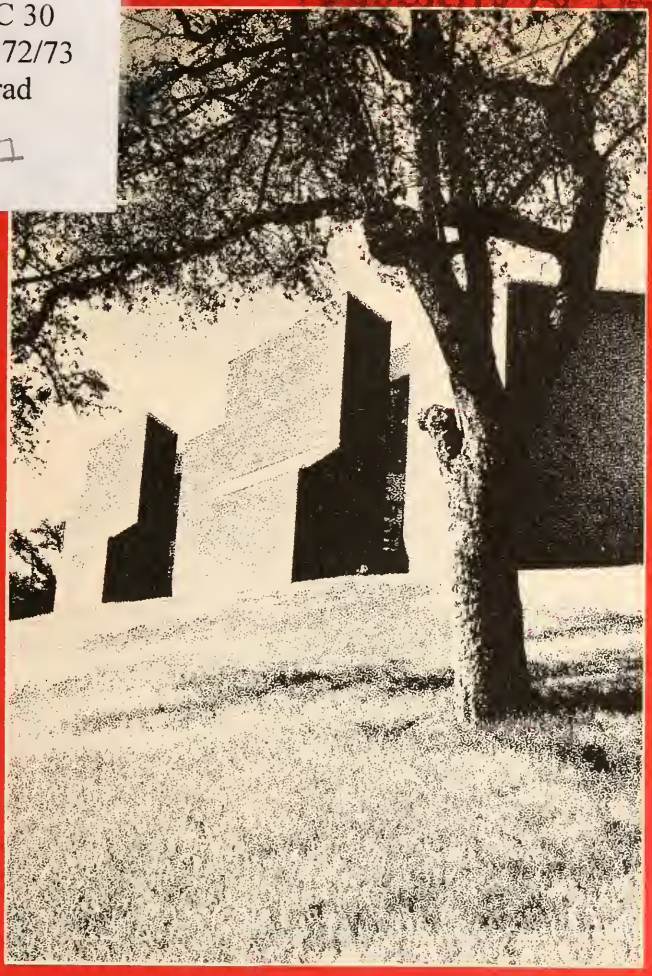
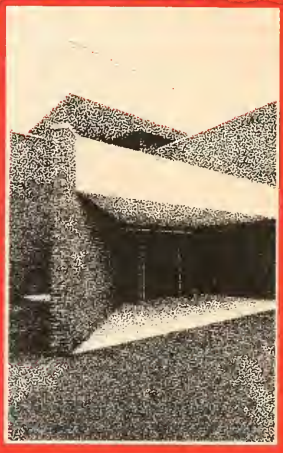
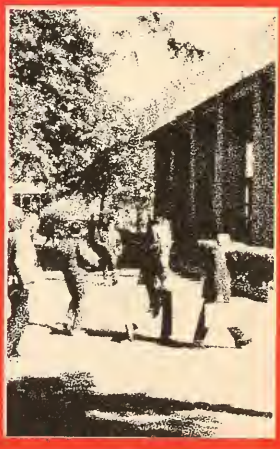
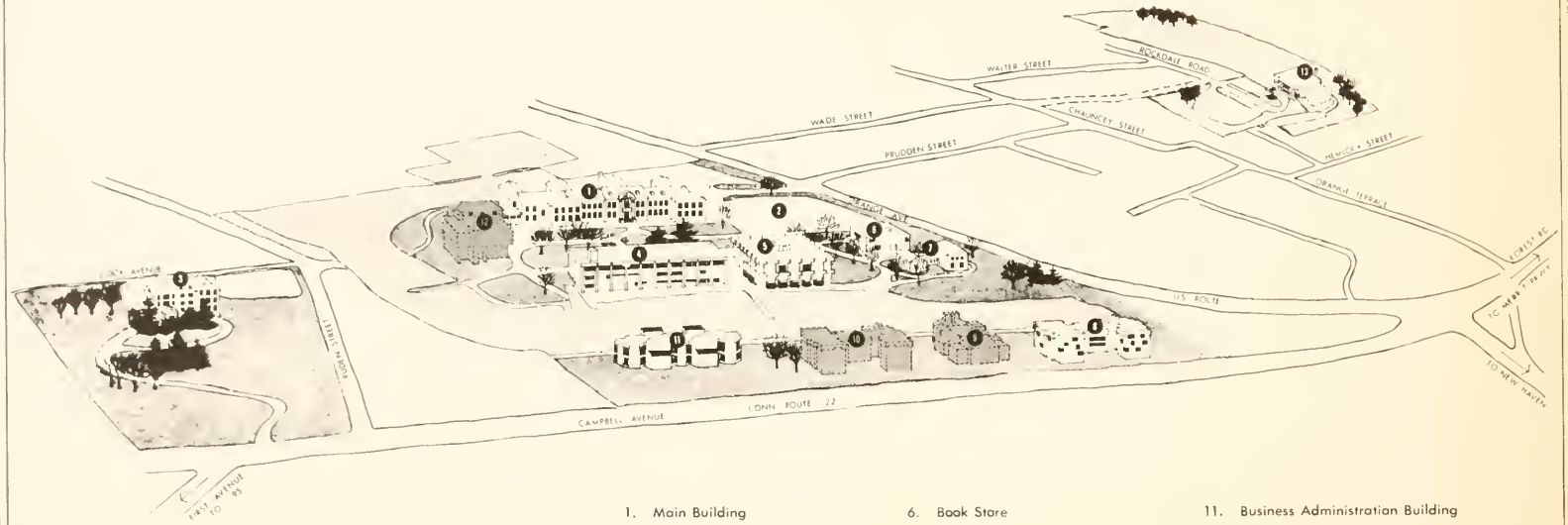






UNIVERSITY OF NEW HAVEN

University of New Haven



1. Main Building
2. Staff, Faculty and Visitor Parking
3. Library
4. Engineering-Science Building
5. Student Center and Cafeteria
6. Book Store
7. Administration Building (Gate House)
8. Residence
9. Planned Dining Complex
10. Planned Residence
11. Business Administration Building
12. Planned New Library
13. Physical Education-Auditorium Building

1972 - 73 Catalog
The Graduate School

UNIVERSITY OF NEW HAVEN

MAIN CAMPUS
300 ORANGE AVENUE
WEST HAVEN, CONNECTICUT 06516
TELEPHONE (203) 934-6321

GRADUATE SCHOOL

Calendar for 1972-1973

September 12-13, 1972 4:30-7:30 p.m.	Registration of new graduate students for the September trimester
September 14, 1972	Fall trimester classes start
September 15, 1972	Last day to file petition for January Graduation
December 11-14, 1972	Final examinations
December 19-20, 1972 4:30-7:30 p.m.	Registration of new graduate students for the January trimester
December 21, 1972	Last day to file petition for June Graduation
January 2, 1973	Winter trimester classes start
March 27-April 2, 1973	Final examinations
April 4-5, 1973 4:30-7:30 p.m.	Registration of new graduate students for the April trimester
April 5, 1973	Last day to file petition for completion of degree requirements in July
April 9, 1973	Spring trimester classes start
May 28, 1973	Memorial Day (legal holiday) Monday classes will meet Friday, June 1, 1973
July 4, 1973	Independence Day (legal holiday) Wednesday classes will meet Friday, July 6, 1973
July 2-5, 1973	Final examinations

This catalog supercedes all previous catalogs and brochures published by the Graduate School and describes academic programs to be offered during 1972-73. Graduate students admitted to the University in the fall of 1972 and thereafter are bound by the regulations published in this catalog. Additional information may be obtained from the Office of the Dean, the Graduate School. Prospective students seeking application blank and further information should write or call the Office of the Dean, the Graduate School.

ADMINISTRATION

Marvin K. Peterson, M.Ed., L. H. D.
President

Phillip S. Kaplan, Ph. D.
Provost and Vice President for Academic Affairs

Joseph A. Parker, Ph. D.
Dean of the Graduate School

Alexis N. Sommers, Ph. D.
Associate Dean of the Graduate School

George A. Schaefer, M. B. A.
Associate Dean for Administration

THE GRADUATE SCHOOL
300 ORANGE AVENUE
WEST HAVEN, CONNECTICUT 06516

PROLOGUE

The Graduate School was established in the Fall, 1969. The first graduate degrees were awarded in June, 1971, and marked a new phase in the University's development.

A graduate program involves a commitment, or rather a major responsibility, to provide a graduate faculty and resources capable of providing sound instruction and a dynamic learning experience. The University has made this commitment.

Higher education serves both the individual students and the total society. Universities exist as essential components of modern life. Society is ever changing as it seeks to solve both old and new problems and to create a better life for each of its members.

The role of the University in meeting the needs of a dynamic society is to provide educated men and women trained to meet the manpower requirements of such a society.

It is the policy of the University to train men and women to lead productive lives and fulfill the needs of the urban environment by offering a broad range of flexible programs. In scheduling courses, the Graduate School seeks to accommodate both part-time and full-time students. Graduate courses and certain fields of concentration are also available to qualified men and women who wish to update their previous training or to acquire new professional skills without pursuing a formal degree objective. The Graduate School is therefore open to all qualified citizens.

DEGREE PROGRAMS

The University of New Haven offers graduate programs leading to the degrees of

Master of Business Administration
Master of Public Administration
Master of Science in Industrial Engineering
Master of Science (in computer and information science)
Master of Science in Criminal Justice

Students may elect a field of concentration within each program. Such concentration consists of a group of electives in a particular area. For example, students may take a field of concentration in Finance by electing a sequence of four courses offered by the Departments of Business Administration and Economics.

GENERAL REQUIREMENTS

I. Admission

An applicant for admission to the Graduate School must submit:
(a) complete official transcripts of all previous college work;
(b) letters of reference; and
(c) a formal application.

Admission decisions are based primarily on an applicant's undergraduate record. A bachelor's degree from an accredited college is required for admission.

In support of their application, students may submit their scores from either the Admission Test for Graduate Study in Business or the Graduate Record Examination (Aptitude Test and Advanced Test). A student may be required to take one of these tests.

Foreign students deficient in English will be required to take remedial work in English. These students will take E 600 (English as a Second Language) offered each trimester by the Department of English.

Undergraduate courses required to meet graduate prerequisites may not count toward meeting the requirements for a graduate degree.

Students may be admitted at the start of any trimester.

Students must register for the first time in person at which time they will have an opportunity to review their undergraduate work with a member of the faculty and plan a program of study. At this time, a student's previous work is reviewed by a member of the faculty who determines what course or courses may be waived, if any. This initial meeting provides an opportunity for the student to discuss with a faculty member his personal goals, academic strengths, and a possible area of concentration.

Subsequent registration for each trimester will generally be handled by mail.

Students may request academic counseling at any time. Appointments with members of the graduate staff and faculty should be scheduled through the Office of the Graduate School.

It is the student's responsibility to select courses in accordance with prerequisites, the advisor's recommendations, the departmental plan of study (if required), and the requirements for the degree.

A student is not required to file a formal plan of study with the Graduate School. It is the student's responsibility to meet the stated requirements for the degree. This policy is consistent with the University's tradition of offering a flexible curriculum to meet the particular needs of an individual.

II. Academic Standards

A student must maintain a 3.0 quality point ratio for graduation.

The Graduate School has a grading system as follows: A—superior performance, B—good performance, C—passing performance, D—poor performance, and F—failure. The quality points by grade are as follows: A=4, B=3, C=2, D=1, and F=0.

A student may take a course over, but the original grade remains on the transcript. A low quality point ratio must be raised by taking additional courses, or by repeating courses, until the minimum necessary for graduation is obtained. If at any time a graduate student's quality point ratio drops below 3.0, the Graduate School will place the student on academic probation. A quality point ratio of less than 3.0 may be grounds for dismissal from the Graduate School, if this is the recommendation of a formal review.

It is expected that a graduate student will receive grades of A and B throughout his career at the University. If a student feels that his class performance will not result in a grade of B or better, he should question his preparation and objectives, and withdraw from the course.

A grade of D, although it carries graduate credit, should generally be repeated. A course with a grade of D may not be counted as a prerequisite for an advanced graduate course.

III. Transfer Credit and Waiver of Courses

Credit may be given for graduate courses taken at other accredited institutions. However, a student must complete a minimum of 30 graduate credit hours in residence at the University of New Haven.

Certain required courses in each program may be waived on the basis of undergraduate courses taken at other accredited institutions. For a course to be waived, a student must first secure the written approval of the Department Chairman or a faculty member acting for the Department Chairman. The basis for waiving certain courses in each program is outlined elsewhere in this catalog.

Any waiver decision is based upon a student's academic record. The decision to waive a course is also based upon the assumption that the student has a good grasp of the material covered in that course. Therefore, a student may subsequently be required to take a course which had been waived previously.

IV. General Information

Graduate School operates on a trimester system. During an academic year, there are three trimesters of 13 weeks each, including the final examination period. Classes generally meet once each week in the late afternoon and evening. The first trimester begins in the second week of September and ends in the second week of December; the second tri-

mester begins in January and ends the first week of April; the third trimester begins about mid-April and ends in early July.

Students must complete all requirements for their degree within 5 years of the date of initial matriculation in the program. Any extension of the time must have the written approval of the Dean of the Graduate School.

V. Cancellation of Classes

In the event that it becomes necessary to cancel graduate classes due to inclement weather, radio announcements starting approximately 3:00 P.M. will be made on all local New Haven radio stations plus WICC, WATR, WTBY, WWCO, WCDQ, WADS, WNLC, WTIC, and WFIC.

An announcement of the cancellation of undergraduate day classes does not apply to the late afternoon and early evening graduate classes. The cancellation of graduate classes will be announced independently.

VI. Requirements for the Thesis & Seminar Project

Students engaged in independent study for the preparation of a thesis or seminar project select, or are assigned, a faculty advisor who acts as the student's research advisor until the thesis or seminar project is completed.

A thesis or seminar project is deposited permanently in the University Library. Students are required to submit two copies of a thesis or seminar project to the Library. The copies should not be bound. Binding will be done by the Library.

Additional copies of a thesis or seminar project are generally required. For this requirement and other regulations regarding the preparation of a thesis or seminar project, students should consult the "Manual for the Preparation of Graduate Theses and Technical Projects." Copies of the manual are available in the Graduate School office.

VII. Awarding of Degrees

The University will award degrees twice a year, in January and at commencement in June. A formal ceremony will not take place in January.

Students completing the requirements for a degree at the end of the fall trimester will receive the degree in January; students completing the requirements for a degree at the end of the winter trimester will receive the degree at the June commencement; and students completing the requirements for a degree at the end of the spring trimester will receive the degree the following January. Students completing the requirements for a degree in early July may request a formal statement that they have completed all requirements for their degree and will receive the degree in January.

All students may elect to receive their degrees at the June commencement should they wish to participate in the ceremony.

Candidates for a degree must file a petition with the Graduate School the first week of the trimester in which they expect to complete the requirements for the degree. Forms for this purpose are available in the Graduate School office. Upon submission of this petition, the Graduate School will review the candidate's record and certify that he has met the requirements for the degree.

Students completing a thesis or seminar project as part of their degree requirement must file a petition in the same manner but must also submit their complete and final manuscript to their thesis or project advisor prior to the end of the tenth week of the trimester in which they expect to complete the requirements for their degree award.

VIII. Tuition and Fees

Tuition and fees for 1972-73 are:

non-refundable application fee	$ 15.00
tuition per credit hour	60.00
registration fee each trimester	5.00
fee for non-credit English 600	50.00
graduation fee	30.00
fee for auditor, per course	125.00
application fee for auditor	5.00

Tuition for graduate courses is due at registration. However, the University policy permits a graduate student to pay one-half the total tuition at registration and the balance within 30 days.

Students are responsible for the payment of tuition to the University, even though some companies will reimburse employees for tuition. It is the responsibility of students to arrange with their employer for reimbursement.

For a student to be eligible for a refund, he must formally notify the Graduate Office of his intention to withdraw and complete the withdrawal form.

The refund policy for graduate students who withdraw from any course or from the program is as follows: 100% refund of tuition upon formal withdrawal in the first week, 75% refund of tuition upon formal withdrawal in the second week, 50% refund of tuition upon formal withdrawal in the third week, and 25% refund of tuition upon formal withdrawal in the fourth week. No refund will be made after the fourth week of classes.

IX. Financial Aid

Financial aid is available to graduate students in the form of scholarships, grants, loans, bursary work, and work-study programs.

The University provides full tuition scholarships to outstanding candidates, based upon academic achievement, financial need, and potential contribution in the field of study. Partial tuition grants are also available for those students needing help to pursue their degree on a part-time basis.

Graduate students may apply for bursary work which includes those student jobs which are available throughout the campus. Typically, a job requires an average of ten hours a week. The Work-Study program is designed to enable students having financial need to work through the school year. Work assignments are made on campus and also with several non-profit community organizations.

The Law Enforcement Assistance Programs

Loans. The Omnibus Crime Control and Safe Streets Act of 1968 established the Law Enforcement Student Loan Program which makes available ten year, interest bearing (7%) notes of up to $1,800 per academic year to full-time students enrolled in undergraduate and graduate programs leading to degrees in areas directly related to law enforcement. These loans can be cancelled at the rate of 25% for each year of employment in a public state, local, or federal law enforcement agency.

Grants. Grants are available to full-time employees of a publicly funded law enforcement agency under the Law Enforcement Student Grant Program. Payments up to $200 per trimester are provided to full-time or part-time students working toward a degree in this field. A recipient must agree to remain with a law enforcement agency for two years after completion of studies funded by this grant.

The State of Connecticut and other states have established loan programs offering long term loans at low interest rates. In Connecticut, a student may borrow up to a maximum of $1500 each school year. Repayment starts one year after graduation. If the family's income (adjusted) is under $15,000 annually, federal interest benefits cover the full interest while in attendance.

Full information and applications for financial aid can be obtained from the Director of Financial Aid, University of New Haven.

MASTER OF BUSINESS ADMINISTRATION

The general purpose of the MBA program at the University of New Haven is the education of men and women at the graduate level for careers in business administration. Vital to this objective is the development of a management perspective enabling students to see the totality of management rather than the narrow concerns of the specialist. Specifically, the program strives to:

1. develop a professional point of view with respect to managing an organization;
2. equip students with the modern analytical and quantitative tools of decision-making;
3. impart an understanding of the tasks and problems of management at all levels by means of case studies and simulation; and
4. increase the student's knowledge and skills in particular management function.

Requirements for the MBA Degree

A maximum of 48 semester hours or a minimum of 33 semester hours is required of candidates for the MBA degree.

A maximum of 15 semester hours of required courses in the MBA program may be waived on the basis of undergraduate courses taken at accredited institutions. Courses in the MBA program that may be waived are: Macroeconomic Analysis, Quantitative Methods I, Marketing, Finance, and Managerial Accounting I.

Each candidate must complete a minimum of 30 graduate semester hours in residence at the University of New Haven in order to qualify for the MBA degree.

Of the 12 semester hours of electives in the MBA program, 6 semester hours may be taken in graduate work offered in other programs.

Undergraduate courses may not be counted in meeting the minimum 33 credits required for the MBA degree.

A student must complete the basic core before taking advanced courses in the MBA program. The basic core consists of EC 601, EC 602, BA 603, and BA 604. EC 601 and BA 603 may be waived.

Candidates for the MBA degree are urged to write a thesis as part of the requirement for the degree. Candidates who elect not to write a thesis must take two additional courses in place of Thesis Seminar, one of which must be BA 637 (Seminar in Management Theory).

Students in the MBA program should be familiar with the use of computers in solving problems. The use of a computer is required in a number of courses in the MBA program. Students deficient in this area should register for Introduction to Digital Computers (IE 603) as an elective early in their program of study.

MBA candidates may instead elect to take an undergraduate computer course (IE 102 Introduction to the Computer or IE 105 Technical Data Processing) offered by the Department of Industrial Engineering.

Waiver Policy

For a course to be waived, a student must first secure the written approval of the department chairman or a faculty member acting for the chairman of the department in which the course is offered. Only the following courses may be waived: Macroeconomic Analysis, Quantitative Methods I, Marketing, Finance, and Managerial Accounting I.

Macroeconomic Analysis may be waived in the case of a student who holds an undergraduate degree in economics or has had a minimum of 6 semester hours of intermediate level economic theory or analysis. A full year of economic principles is not considered an intermediate level course.

Quantitative Methods I may be waived in the case of a student who has had at least 12 semester hours of college mathematics.

Marketing may be waived in the case of a student who holds an undergraduate degree in marketing or has taken a minor in marketing, including courses in marketing management and marketing research.

Finance may be waived in the case of a student who holds an undergraduate degree in finance or has taken a minimum of 6 semester hours of advanced level courses in finance, including 3 semester hours of money and banking.

Managerial Accounting I may be waived in the case of a student who has had six semester hours of accounting or by the approval of the accounting department.

Thesis

Students electing to write a thesis must register for Thesis Seminar. The thesis must show ability to organize material in a clear and original manner and present well-reasoned conclusions.

The thesis is written under the direction of the faculty member in charge of the thesis seminar or a faculty member with special competence in the subject matter of the thesis. A first draft of the thesis must be presented to the candidate's advisor at least 4 weeks prior to the end of the term in which the candidate expects to complete the requirements for the MBA degree. No final examination on the thesis is required.

The thesis is deposited permanently in the University Library. Students are required to submit two copies of the thesis to the Library. Additional copies of the thesis are usually required. For this requirement and other regulations regarding the preparation of a thesis, students should consult the "Manual for the Preparation of Graduate Theses and Technical Projects." Copies of the manual are available in the Graduate School office.

PROGRAM OF STUDY FOR THE MASTER OF BUSINESS ADMINISTRATION DEGREE

Required Courses

Course Number	*and Title*	*Credit*
*EC 601	Macroeconomic Analysis	3
EC 602	Microeconomic Analysis	3
*BA 603	Quantitative Methods I	3
BA 604	Quantitative Methods II	3
IE 601	Management Science	3
*BA 609	Marketing	3
*BA 615	Finance	3
P 619	Organizational Behavior	3
*A 620	Managerial Accounting I	3
A 621	Managerial Accounting II	3
EC 625	Industrial Relations	3
**BA 635	Thesis Seminar	3
	Electives	12
		48

Elective Courses

Course Number	*and Title*	*Credit*
A 661	Managerial Accounting Seminar	3
BA 617	Financial Institutions and Capital Markets	3
BA 622	Commercial Management	3
**BA 637	Seminar in Management Theory	3
BA 639	Market Research	3
BA 641	Mathematical Models and Methods in Marketing	3
BA 643	International Business Operations	3
BA 645	Current Problems in Corporate Finance	3
BA 649	Investments	3
BA 655	Seminar in Futures Market Analysis	3
BA 657	Forecasting	3
BA 669	Insurance: Principles and Practices	3
BA 673	Business Law: Contracts and Sales	3
BA 677	Business Law: Negotiable Instruments, Business Organizations, and Real Estate	3
BA 680	Current Topics in Business Administration	3
BA 690	Research Project in Business Administration	3
EC 653	Econometrics	3
EC 660	Economic Development of Japan	3
EC 687	Collective Bargaining	3
EC 691	Labor Legislation	3
IE 603	Introduction to Digital Computers	3

* Indicates courses that may be waived.

** Candidates who elect not to write a thesis must take two additional courses in place of Thesis Seminar, one of which must be BA 637 (Seminar in Management Theory).

MASTER OF PUBLIC ADMINISTRATION

The general purpose of the Master of Public Administration degree at the University of New Haven is the training of men and women at the graduate level of public service careers. Specifically, the program strives to:

1. equip students with the modern analytical and quantitative tools of decision-making and their application to the complex problems of government;
2. expose the students to the wide range of administrative and managerial problems and responsibilities of government; and
3. increase the student's knowledge and skills in the particular management functions of budgeting, planning, public policy formulation, public finance, and public personnel administration.

Requirements for the Master of Public Administration Degree

A maximum of 45 semester hours or a minimum of 36 semester hours is required of candidates for this degree.

A maximum of 9 semester hours of required courses in the MPA program may be waived on the basis of undergraduate courses and/or appropriate work experience. For a course to be waived, a student must first secure the written approval of the department chairman or a faculty member acting for the chairman of the department in which the course is offered. Only the following courses may be waived: Seminar in Communities and Social Change, Public Administration Internship, and Research Project in Public Administration.

Seminar in Communities and Social Change may be waived in the case of a student who has taken a minimum of 12 semester hours in sociology, including a course in community relations and/or the candidate's work experience.

Public Administration Internship may be waived for a student on the basis of the candidate's work experience. The basis for the waiver is to be determined by the department chairman.

Research Project in Public Administration may be waived for a student on the basis of the candidate's work experience. The basis for waiver is to be determined by the department chairman.

Each candidate must complete a minimum of 30 graduate semester hours in residence at the University of New Haven in order to qualify for the Master of Public Administration degree.

Undergraduate courses may not be counted in meeting the minimum 30 credits required for the Master of Public Administration degree.

Students in this program should be familiar with the use of computers. The use of a computer is required in a number of courses in the program. Students deficient in this area should register for Introduction to Digital Computers (IE603) as an elective early in their program of study.

Of the 12 semester hours of electives in the MPA program, 6 semester hours may be taken in graduate courses offered in other programs.

PROGRAM OF STUDY FOR THE MASTER OF PUBLIC ADMINISTRATION DEGREE

Required Courses

Course Number	*and Title*	*Credit*
PA 600	Principles of Public Administration	3
EC 608	Economics for Public Administrators	3
PA 691	Research Methods in Public Administration	3
*PA 693	Public Administration Internship	3
PA 635	Statistics for Public Administrators	3
PA 625	Administrative Behavior	3
PA 620	Public Personnel Administration and Collective Bargaining in the Public Sector	3
PA 602	Public Policy Formulation and Implementation	3
PA 632	Public Finance and Budgeting	3
*PA 604	Seminar in Communities and Social Change	3
*PA 690	Research Project in Public Administration	3
	Electives	12
		45

Elective Courses

Course Number	*and Title*	*Credit*
BA 603	Quantitative Methods I	3
PA 603	Resource Administration	3
PA 605	The Communication Process	3
PA 630	Governmental Accounting	3
PA 633	Financial Administration	3
PA 634	Problems of Municipal Management	3
PA 640	Purchasing	3
PA 650	Administrative Law	3
PA 651	Municipal Corporations	3
PA 660	Urban Planning: Theory and Practice	3
PA 661	Problems of Metropolitan Areas	3
PA 662	Environmental Design	3
PA 692	Seminar in Public Opinion	3
EC 625	Industrial Relations	3
EC 687	Collective Bargaining	3
IE 603	Introduction to Digital Computers	3
IE 604	Management Systems	3
IE 614	Data Information Systems	3

IE 621	Operations Research I	3
PS 604	Political Parties	3
PS 608	Legislative Process	3
PS 616	Urban Government and Politics	3
SS 600	Minority Group Relations	3
SS 610	Urban Sociology	3
SS 631	Population Problems and Human Ecology	3
P 631	Social Psychology	3
P 636	Abnormal Psychology	3
P 670	Psychology of Personality	3

* Indicates courses that may be waived.

MASTER OF SCIENCE

INDUSTRIAL ENGINEERING
COMPUTER AND INFORMATION SCIENCE

Industrial engineering is the interaction between management and the traditional engineering function. Consequently, industrial engineering is a broad discipline concerned with man-machine systems, economic decision-making, operations research, production control, and management information systems. The Department of Industrial Engineering offers professional education in these and other specialized areas, and awards the professional degree Master of Science in Industrial Engineering and the special-concentration degree Master of Science. Separate core requirements exist for the MSIE degree and for the MS degree in the area of computer and information science.

Degree Requirements

A normal maximum of 48 semester hours or a minimum of 30 semester hours is required for any MS degree in the Department of Industrial Engineering. Core curricula must be completed prior to enrolling for electives unless permission to do otherwise is obtained from the Department. Course work for a degree is determined at the time of a student's initial registration. Certain core courses may be waived by written permission of the Department if a student's record indicates equivalent prior education or experience. All such waivers are conditional upon subsequent academic performance and may be removed or modified by the Department if academic probation or course failures are judged to be the result of waiver decisions. Graduate credit may be transferred from other accredited institutions, but in all cases the residence requirement for a degree shall be 30 semester hours.

There is no thesis requirement in industrial engineering. All degree candidates must, however, register for IE 690 Seminar Project after completing at least 15 semester hours, and must satisfactorily complete this course within one calendar year. The course requires independent study under the direction of a faculty advisor and must result in a technical report of professional quality. Regulations regarding the project report are available from the Department. Report format must conform to the "Manual for the Preparation of Graduate Theses and Technical Projects" published by the Graduate School. Each technical report is graded by the faculty advisor and must be approved by the Chairman of Industrial Engineering and by the Graduate School. The final report, in two copies, is deposited in the University Library.

Computer programming ability is required of all graduate students in industrial engineering. Students deficient in this ability should select IE 603 Introduction to Digital Computers as an elective, or enroll in the undergraduate courses IE 102 or IE 105. No graduate credit is granted for these two latter courses.

Interdisciplinary study is encouraged in both degree programs. Up to six semester hours of electives may be taken outside the Department of Industrial Engineering. Students interested in additional concentrations outside industrial engineering must prepare a plan of study with the Chairman of Industrial Engineering or with the Graduate School.

Waiver Policy

The following courses may be waived at the discretion of the Department for qualified students:

IE 603 Introduction to Digital Computers may be waived only upon successful completion of a written examination administered by the Department of Industrial Engineering.

EC 601 Macroeconomic Analysis may be waived by a student holding an undergraduate degree in economics or who has had a minimum of six semester hours of intermediate level economic theory or analysis. Principles of economics are not considered intermediate level course work.

A 620 Managerial Accounting I may be waived by a student who has had a minimum of six semester hours of accounting.

IE 601 Management Science may be waived on the basis of undergraduate courses in operations research or management science.

IE 602 Quality Analysis may be waived on the basis of undergraduate courses in quality control, or quality planning and analysis.

IE 607 Statistics and Probability may be waived on the basis of a minimum of six semester hours in undergraduate statistics, probability, and applied stochastic processes. Students seeking to waive this course may be required to pass a qualifying examination.

IE 604 Management Systems may be waived on the basis of at least six semester hours in undergraduate management theory, information systems, or systems analysis.

M 610 Computational Mathematics may be waived by a student demonstrating above average performance in 15 semester hours or more of undergraduate course work in calculus and advanced mathematics.

EE 610 Introduction to Cybernetics may be waived by a student holding a degree in electrical engineering, or by a student with at least six semester hours in computer logic, communications theory, cybernetics, or switching theory.

IE 614 Data Information Systems may be waived by a candidate with at least three semester hours of management information systems theory or computer applications.

In all cases where course waivers are uncertain, the Department of Industrial Engineering will administer a qualifying examination to determine the student's actual knowledge or experience.

Admission

Degree programs in industrial engineering are open to qualified holders of graduate degrees in engineering, psychology, mathematics, physics, business administration, and other social or physical sciences. Given the broad nature of industrial engineering, non-engineering degree holders are encouraged to discuss their particular interests and degree goals with the Department or with the Graduate School.

DEGREE PROGRAMS

Candidates for the professional MSIE degree must complete the following core requirement:

MSIE Core Requirement

Course Number	*and Title*	*Credit*
*A 620	Managerial Accounting I	3
*IE 601	Management Science	3
*IE 602	Quality Analysis	3
*EC 601	Macroeconomic Analysis	3
*IE 607	Statistics and Probability	3
*IE 604	Management Systems	3
IE 611	Budgeting and Control	3
IE 621	Operations Research I	3
IE 622	Operations Research II	3
EC 625	Industrial Relations	3
IE 681	Industrial Dynamics	3
IE 690	Seminar Project	3
	Electives	12
		48

Candidates for the MS degree in Computer and Information Science must complete the following core requirement:

MS in Computer and Information Science

Course Number	*and Title*	*Credit*
*IE 603	Introduction to Digital Computers	3
*IE 604	Management Systems	3
*EC 601	Macroeconomic Analysis	3
*M 610	Computational Mathematics	3
*IE 614	Data Information Systems	3
*EE 610	Introduction to Cybernetics	3
IE 605	Common Programming Languages I	3
M 620	Numerical Analysis	3
IE 621	Operations Research I	3
EE 615	Computer Logic and Intelligence	3
IE 610	Computer Systems Design	3
IE 690	Seminar Project	3
	Electives	12
		48

* Indicates courses that may be waived.

Possible electives for the general elective specialties of operations management, operations research, and computer and information science are as follows:

Recommended Electives in Operations Management

Course Number and Title		*Credit*
IE 603	Introduction to Digital Computers	3
IE 612	Industrial Systems Economics	3
IE 619	Enterprise Design and Evaluation	3
IE 631	Production Engineering	3
IE 641	Quality Control Economics	3
IE 643	Reliability and Maintainability	3
IE 651	Human Engineering I	3
IE 652	Human Engineering II	3
IE 655	Value Engineering	3
IE 663	Tooling Techniques I	3
IE 664	Tooling Techniques II	3

Recommended Electives in Operations Research

BA 657	Forecasting	3
EC 653	Econometrics	3
IE 614	Data Information Systems	3
IE 623	Operations Research III	3
IE 683	Systems Analysis	3
IE 685	Theory of Optimization	3
M 610	Computational Mathematics	3
M 620	Numerical Analysis	3
ME 620	Mathematical Models of Mechanical Systems	3

Recommended Electives in Computer and Information Science

Course Number and Title		*Credit*
CJ 628	Introduction to Systems Theory	3
EE 620	Analog Computers	3
IE 606	Common Programming Languages II	3
IE 607	Statistics and Probability	3
IE 681	Industrial Dynamics	3
IE 683	Systems Analysis	3
IE 685	Theory of Optimization	3
IE 688	Seminar in Inferential Statistics	3
IE 689	Seminar in Descriptive Statistics	3
ME 615	Adaptive Control Systems	3
ME 620	Mathematical Modeling of Mechanical Systems	3

MASTER OF SCIENCE IN CRIMINAL JUSTICE

The President's Commission on Law Enforcement and Administration of Justice assigned a high priority to the task of improving the education and training of personnel entrusted with the administration of criminal justice in the United States.

A key objective of the Master of Science in Criminal Justice program is the training and education of men and women planning careers in the field of criminal justice as well as the advanced training and education of the men and women who staff the agencies and institutions of the criminal justice system.

The University views the criminal justice system as one continuous integrated process from a study of the nature of deviant behavior to the role of rehabilitation and parole.

The program stresses a broad understanding of the social and behavioral sciences, the institutions and the processes of the criminal justice system, and the development of methodological tools and skills. This is done somewhat at the expense of courses that are narrowly professional in the belief that the field of criminal justice is dynamic and that a broad understanding of the social and behavioral sciences and the methodological skills and tools will prove more valuable to a student's career in the long run than narrow professional training.

The broad fields of the criminal justice program at the University are social control, social deviance, the institutions and processes of the criminal justice system, and methodological tools and skills.

The methodological courses expose students to the tools of research and analysis and the contribution of systems analysis to the efficient administration of the criminal justice system.

The courses in the area of social control stress the theories of control of the behavior of man in a social order and the sanctions imposed by different societies to control the social behavior of their members.

Courses in the field of social deviance focus on theories and patterns of deviant behavior, stressing criminal behavior as well as other forms of deviant behavior.

Courses in the area of criminal justice institutions and processes stress the study of the existing system from the police, through the courts, the penitentiaries, and the system of probation and parole.

Requirements for the Master of Science in Criminal Justice Degree

A total of 39 semester hours is required of candidates for the degree of Master of Science in Criminal Justice.

Candidates for the degree of Master of Science in Criminal Justice must complete 21 semester hours of required courses in the core curriculum.

In addition to the required core, students may select 18 semester hours of electives from one of three major areas of concentration. The three areas of concentration are: social deviance and control, criminal justice institutions and the processes of criminal investigation, and criminal justice systems.

A student may also pursue a broader program by selecting 18 semester hours of electives which cut across the three areas of concentration.

Except for the required core, the student's program of study is determined largely by the student and his faculty advisor.

Credit may be given for graduate courses taken at other accredited institutions. However, a student must complete a minimum of 33 graduate semester hours in residence at the University of New Haven in order to qualify for the degree of Master of Science in Criminal Justice.

PROGRAM OF STUDY FOR THE MASTER OF SCIENCE IN CRIMINAL JUSTICE DEGREE

Required Courses

Course Number	*and Title*	*Credit*
CJ 600	Seminar in Theory & Philosophy of Law	3
CJ 605	Seminar in Social Deviance	3
CJ 607	Seminar in Criminal Justice Institutions	3
CJ 601	Seminar in Interpersonal Relations	3
CJ 637	Contemporary Issues in Criminal Justice	3
CJ 642	Research Techniques in the Social Sciences	3
CJ 628	Introduction to Systems Theory	3
	Electives	18
		39

Elective Courses

Course Number	*and Title*	*Credit*
	Social Deviance and Control	
P 631	Social Psychology	3
P 632	Group Dynamics and Group Treatment	3
P 633	Problems of Drug Abuse	3
P 634	Personality Assessment	3
P 636	Abnormal Psychology	3
PS 601	Constitutional Law	3
PS 602	Civil Liberties and Rights	3
PS 605	Criminal Law	3
SS 600	Minority Group Relations & Urban Sociology	3
SS 605	Culture and Personality	3
SS 607	Delinquency and Juvenile Crime	3
SS 608	Criminology	3
SS 609	Comparative Social Organization	3
SS 635	Sociology of Law	3

Criminal Justice Institutions and The Processes of Criminal Investigation

CJ 608	Law and Evidence	3
CJ 610	Administration of Justice	3
CJ 612	Concepts and Issues in Police Administration	3
CJ 613	Criminal Investigation	3
CJ 614	Advanced Criminal Investigation	3
CJ 616	Advanced Forensic Science	3
CJ 617	Correctional Administration	3
CJ 618	Probation and Parole: Theory and Practice	3
CJ 619	Seminar in Comparative Criminal Justice Systems	3
P 632	Group Dynamics and Group Treatment	3
SS 600	Minority Group Relations & Urban Sociology	3
SS 604	Seminar in Communities and Social Change	3

Criminal Justice Systems

IE 603	Introduction to Digital Computers	3
IE 604	Management Systems	3
IE 610	Data Information Systems	3
IE 614	Computer Systems Design	3
IE 621	Operations Research I	3
IE 683	Systems Analysis	3
IE 688	Seminar in Inferential Statistics	3
IE 689	Seminar in Descriptive Statistics	3

COURSE DESCRIPTIONS

Department of Accounting

A620 Managerial Accounting I

The concepts, principles and procedures underlying the generation and uses of accounting information for management purposes.

Prerequisites: EC 601-602

A621 Managerial Accounting II

Accounting analysis for the managerial functions of planning, controlling and evaluating the performance of the business firm.

Prerequisite: A 620 or 6 or more credits in accounting.

A661 Managerial Accounting Seminar

Advanced topics in managerial accounting.

Prerequisite: Permission of Instructor

Department of Business Administration

BA603 Quantitative Methods I

Basic mathematics and statistics for business problem solving. Includes set theory, matrix algebra, probability, models, descriptive statistical measures, regression and correlation, time series, index numbers, statistical inference, differential and integral calculus.

No prerequisite.

BA604 Quantitative Methods II

More advanced mathematics for business problem solving. Includes mathematical model building, sequences, finite and infinite calculus, optimization models, simulation, mathematical programming and multiple regression.

Prerequisite: BA 603 or equivalent.

BA609 Marketing

An intensive study of modern marketing methods and concepts for the student who has not had undergraduate work in marketing. Includes a review of marketing fundamentals, a study of the decision-making problems encountered by the marketing executive, and the relation of marketing to environmental forces.

Prerequisite: EC 601-602
BA 603-604

BA615 Finance

A study of business corporations in their modern setting. A survey of historical development followed by promotional functions, description and evaluation of corporate financial instruments, capitalization, corporate management, sale and regulation of corporate securities, income and working capital, corporate expansion, failure and reorganization.

Prerequisites: EC 601-602
BA 603-604

BA617 Financial Institutions and Capital Markets

This course stresses the relationship between the financial system and the level, growth, and stability of aggregate economic activity. Analyzes the institutional and theoretical structure of monetary change and the manner in which financial institutions and markets transmit and influence the impact of monetary policy. Special attention to the role of nonmonetary financial intermediaries, the structure and regulation of capital markets, and the functions of market yields as the price mechanism that allocates saving to various categories of economic investments.

Prerequisites: EC 601-602
BA 603-604

BA622 Commercial Management

Current topics in supervision, management, personnel relations, and related problem areas confronted by the corporate manager.

Prerequisites: EC 601-602
BA 603-604

BA633 Managerial Economics

A study of the application of the major tools of economic analysis to the problems encountered by management in the organization of the firm. Topics include the theory and measurement of consumer demand, measurement and control of costs, the effects of public policy upon managerial decisions, and pricing techniques and the allocation of capital within the firm.

Prerequisites: EC 601-602
BA 603-604

BA635 Thesis Seminar

Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

Prerequisite: 21 graduate hours.

BA637 Seminar in Management Theory

A survey of the literature of management theory. Based on a wide range of independent reading, the student is provided the opportunity to analyze and assess the contribution by major writers in the field of management theory.

Prerequisite: 21 graduate hours.

BA639 Marketing Research

An overview of marketing research as part of the marketing information system. A study in depth of managerial considerations as they relate to recognition of information needs, initiation and approval of marketing research projects, evaluation of alternative research approaches and measurement methods, effective utilization of research output, location within the corporate structure and budgetary controls.

Prerequisite: BA 609

BA641 Mathematical Models and Methods in Marketing

The treatment of the basic decision problems of marketing management in terms of a conceptual framework for analysis. Consideration of the role played by human judgements and the mathematical tools available to aid in these judgements in a number of marketing areas, notably market analysis, pricing decisions, advertising decisions, promotional decisions, and selection of distribution channels.

Prerequisites: BA 609 & BA 639

BA643 International Business Operations

An integration of the international economic, environmental, and institutional concepts and constraints as they apply to decisions made by the manager of international business operations. The course is designed to give students a grasp of strategy formulation and organization for a firm in international business.

Prerequisites: EC 601-602
BA 603-604

BA645 Current Problems in Corporate Finance

Designed to enable students to apply the principles acquired in the basic course in corporate finance to the solution of advanced problems faced by corporate management. Topics include optimal depreciation policies and investment credits, depletion, capital gains and dividend taxation, and merger valuation problems.

Prerequisite: BA 615

BA649 Investments

Designed to acquaint the student with security markets, the various types of investment securities, and the recognized tests of safety, income, and marketability. Study of the techniques for critical analysis and interpretation of corporate reports from the investment viewpoint.

Prerequisites: EC 601-602
BA 603-604

BA655 Seminar in Futures Market Analysis

A conceptional and operational study of futures markets, the participants and major exchanges including an in depth analysis of the major commodities traded and the fundamental and technical factors influencing their prices.

Prerequisite: BA 615

BA657 Forecasting

Critical analysis of cyclical and growth theories and models is made in an attempt to establish a valid framework for economic forecasting. Identification, analysis, and appraisal of forces influencing the course of economic activity is stressed. Students are provided an opportunity to utilize a variety of forecasting and projecting techniques.

Prerequisites: EC 601-602
BA 603-604

BA669 Insurance: Principles and Practices

Comprehensive introduction to the general insurance field. Covers types of insurance and general underlying principles. Considers the management of insurable risk in industrial and commercial firms.

Prerequisites: EC 601-602
BA 603-604

BA673 Business Law: Contracts and Sales

Survey of the ordinary legal aspects of contracts and the results of contractual obligations. The law governing the marketing of goods as it relates to personal property. The law of bailments and common carriers.

Prerequisites: EC 601-602
BA 603-604

BA677 Business Law: Negotiable Instruments, Business Organizations, and Real Estate

Survey of the law of negotiable instruments as reflected in the Uniform Negotiable Instruments Act and the Uniform Commercial Code, with emphasis on commercial paper commonly used in business transactions. The law concerning the formation and operation of partnerships, corporations, and other business organizations. Real property law respecting conveyances, mortgages, and landlord and tenant.

Prerequisite: BA 673

BA680 Current Topics in Business Administration

Selected topics in business. May be repeated for credit.

Prerequisite: 15 graduate hours or permission of the instructor.

BA690 Research Project in Business Administration

Independent study under the supervision of an advisor.

Prerequisite: 15 graduate hours or permission of the instructor.

CJ600 Seminar in Theory and Philosophy of Law

The theory and philosophy of law and the relationship between law and society. Emphasis on the nature of the judicial process, the issues of law and personal morality, non victim crimes, and the relationship of enforcement agencies to the rule of law.

CJ601 Seminar in Interpersonal Relations

Interpersonal communication in teaching, supervision, and in various work relationships. The criminal justice worker as a resource person and facilitator of others is stressed. Humanistic psychology and interpersonal psychology provide the theoretical base. Maximum enrollment 20 students.

CJ605 Seminar in Social Deviance

A survey of theories relating to the scope and nature of the crime problem. Consideration of the problems of deviancy, including social norms and deviancy, mental disturbances, juvenile crime, and the various possible and actual responses to deviancy. Various approaches to the problem of rehabilitation.

CJ607 Seminar in Criminal Justice Institutions

The institutions of law and law enforcement. Institutions as rehabilitation centers and the effective administration of such centers.

CJ608 Law and Evidence

Comprehensive analysis of the rules of evidence. Topics include judicial notice, presumptions, the nature of real and circumstantial evidence, hearsay evidence, confessions and admissions, and witnesses. Emphasis on evidence in criminal cases.

CJ610 Administration of Justice

The machinery of justice in theory and practice. The rule of law and its exceptions in the actual administration of justice. Emphasis on the progressive changes in the development of childrens' and adolescents' courts, probation, and classification clinics. Crime prevention and reforms of the criminal law. Special problems of justice and the poor. Administrative denials of justice, the insane offender, the white-collar criminal, and social reconstruction through law.

CJ612 Concepts and Issues in Police Administration

The development of the theory and practice of police administration in the United States. Significant developments and ideas of those who have made major contributions to American police administration.

CJ613 Criminal Investigation

An introduction to criminal investigation in the field. Conduct at the crime scene, interviewing and interrogation of witnesses and suspects, the use of informants, and techniques of surveillance. Special techniques employed in particular kinds of investigations as well as presentation of the case in court.

CJ614 Advanced Criminal Investigation

The application of criminal investigation techniques to specific crimes. Emphasis on homicide and suicide investigation. Crimes of violence and other important crimes.

CJ616 Advanced Forensic Science

Emphasis on specific forensic science topics and laboratory testing and identification of physical evidence.

CJ617 Correctional Administration

The basic organization and objectives of a department of correction. Specific administrative principles required for effective conduct and operation of a correctional organization.

CJ618 Probation and Parole: Theory and Practice

The philosophy, theory, and methods employed in probation, parole, and institutional treatment of the offender. The role of authority, casework, classification, treatment policy, and administrative organization in determining the consequences of correctional practice.

CJ619 Seminar in Comparative Criminal Justice Systems

A cross cultural study of police, court, and correctional systems and methods.

CJ628 Introduction to Systems Theory

Concepts of systems theory and systems analysis in contemporary socio-technical environments.

CJ637 Contemporary Issues in Criminal Justice

Topics selected by students relating to current issues and concerns in the field of criminal justice. Each student will be required to write a paper and deliver an oral presentation on his selected topic. Maximum enrollment 12 students.

CJ642 Research Techniques in the Social Sciences

Research methodology as applied to problems and issues in the field of criminal justice.

CJ690 Research Project in Criminal Justice

Independent study under the guidance of an advisor in an area of mutual interest.

EC601 Macroeconomic Analysis

An examination of the roles of consumption, investment, government finance, and money influencing national income and output, employment, the price level, and rate of growth. Policies for economic stability and growth.

No prerequisite.

EC602 Microeconomic Analysis

Topics in resource allocation and price determination. Theories of choice of consumers, firms, resource owners under monopoly, monopsony, competition, and alternative market forms.

No prerequisite.

EC608 Economics for Public Administrators

An examination of the roles of consumption, investment, government expenditure, and money influencing national income, output, employment, and price level, and growth rate. Special emphasis upon the roles of fiscal and monetary policy and the economics of contemporary social problems.

No prerequisite.

EC625 Industrial Relations

Collective bargaining strategies and policies of management and unions, union structure and tactics, labor legislation, wage theories, and problems of union security, unemployment and government control.

Prerequisite: EC 601-602

EC629 Public Policies Toward Business

A survey of the economic aspects of government and business relations. Emphasizes the concept of public control over certain types of business and certain forms of business activity. Combination movements, pricing procedures, anti-trust laws and agencies enforcing them, regulation of transportation and public utilities, rate-making for transport, and pricing public utility services.

Prerequisite: EC 601-602

EC653 Econometrics

Review of probability, statistics, and matrix algebra. Linear models, including two, three, and multi-variable regression models as well as input models. Nonlinear models, including nonlinear regression models and nonlinear functions fit to time series data. Computer simulation models, and problems of specification, estimation, prediction, and verification.

Prerequisites: EC 601-602
BA 603-604

EC660 Economic Development of Japan

A study in the modernization and economic growth of modern Japan since the Meiji Restoration (1869). Topics include the role of government and planning, and of foreign trade, investment, and technology; resource allocation, economic organization, capital formation, agricultural policies, population growth, and social change.

No prerequisite.

EC687 Collective Bargaining

Emphasis on the negotiating process. The labor contract as it involves wages, worker security, management authority, and handling of grievances arising during the life of the contract.

Prerequisite: EC 625

EC691 Labor Legislation

Considers the legel status of unions as set forth in state and federal legislation, and court decisions. Reviews recent NLRB rulings. Protective legislation dealing with wages, hours, child labor, and accident and unemployment compensation.

Prerequisite: EC 625

Department of Electrical Engineering

EE610 Introduction to Cybernetics

Properties of and types of systems, including resolution of graphs and resolution level. Definitions of cybernetics. Information, signals, codes, and modelling structures appropriate to systems. Digital computers, algorithms, programs, logic nets, and studies in cybernetic modelling. Information and communication theory, including perception, sensors in inanimate systems, and man-machine communication.

No prerequisite.

EE615 Computer Logic and Intelligence

Sources of artificial intelligence, encompassing introductory concepts, basic theories, deterministic inference models, statistical inference models, and neurophysical models. Application of machines to learning problems, induction, games, theorem proving, neutral sets, pattern recognition, and heuristic programming.

Prerequisite: EE 610

EE620 Analog Computers

An advanced treatment of the theory and design of electronic analog computers and digital differential analyzers. Principles and operation of function generators, multipliers, integrators, and analog-to-digital converters. Solution of linear and non-linear differential equations. Applications to the solution of engineering and industrial process problems.

Prerequisite: Permission of Instructor.

IE601 Management Science

Introduction to management science and operations research philosophy, techniques, and areas of application. Topics include linear programming, inventory and queuing theory, dynamic programming, and systems analysis.

Prerequisites: BA 603 and BA 604, or IE 607

IE602 Quality Analysis

Concepts of quality control and statistical quality analysis. Sampling techniques and decision processes.

Prerequisites: IE 601 and IE 607

IE603 Introduction to Digital Computers

An introduction to the basic elements of computer science, including computer hardware, software, programming concepts, and information and data processing. Exercises in program solving through the use of a computer and a simple programming language.

No prerequisite.

IE604 Management Systems

An analysis of management organization theory and principles as applied to the total operating system with stress on normative behavioral systems.

No prerequisite.

IE605-606 Common Programming Languages I and II

Advanced programming in both general and special purpose languages, such as PLI, RPG, BASIC, GPSS, SIMSCRIPT, AND COBOL. Use of time sharing, on-line, and batch processing systems.

Prerequisite: IE 603

IE607 Statistics and Probability

A comprehensive introduction to engineering and mathematical, statistical, and probability theory as applied to operational problems. Includes descriptive statistics, inference, elementary probability, and normal binominal, Poisson, and hypergeometric distributions.

Prerequisite: Advanced Calculus

IE610 Computer Systems Design

Techniques for designing, installing, and operating computer systems and their peripheral equipment. Concepts of decision with respect to compiler and hardware selection. Development of operating procedures, from design, systems charting, and documentation.

Prerequisite: IE 603

IE611 Budgeting and Control

An analytical approach as applied to the principles and policies of operational budgeting and control of expense and capital investments. Includes forecasting techniques, development of totally integrated systems with traditional financial statements and controls from top management to first line supervision.

Prerequisite: A 620

IE612 Industrial Systems Economics

The systems analysis approach and methods of industrial engineering applied to the examination of industrial production, the interaction between technical and managerial groups, and the determination of production methods according to productivity measures and alternate cost analysis.

Prerequisite: Permission of the Instructor

IE614 Data Information Systems

Introduction to automated information systems planning and operations and their impact on management decision-making, control functions, and communication capabilities. An overview of concepts and procedures with applications in urban environments, large organizations, and governmental agencies. Selected case studies are analyzed.

Prerequisite: IE 603

IE619 Enterprise Design and Evaluation

An analysis of the principles and methods used in estimating the probable economic characteristics of proposed enterprises. The student is required to formulate a proposed enterprise, including the technical, financial, and organizational requirements.

Prerequisite: IE 601

IE621 Operations Research I

Introduction to the philosophy and methodology of operations research. Emphasis on the analysis of linear programming theory and application. Includes assignments, transportation, and simplex methods.

Prerequisites: BA 604 or IE 607

IE622 Operations Research II

Analysis of the mathematical models of finite and infinite queuing theory as they apply to industrial problems such as inventory policy and machine interference.

Prerequisites: BA 604 or IE 607

IE623 Operations Research III

Analysis and development of probabilistic techniques as applied to decision theory, game theory, and stochastic processes and their applications.

Prerequisites: BA 604 or IE 607

IE631 Production Engineering

An analysis and practical application of engineering activity that results in the transformation of natural resources into a finished product.

Prerequisites: IE 601 and IE 602

IE641 Quality Control Economics

An economic managerial analysis of statistical quality control sampling and control chart systems with application to accepted and hybrid systems.

Prerequisites: IE 602 and IE 607 or BA 604

IE643 Reliability and Maintainability

The basic theory and methodology of reliability and maintainability, including application of discrete and continuous distribution and statistical designs. Reliability, estimation, structure models, and growth models.

Prerequisites: IE 602 and IE 607 or BA 604

IE651-652 Human Engineering I & II

A broad coverage of the physiological, psychological, and sociological aspects of man and the society in which he lives and works. Special topics include human factors, motivation, group dynamics, and ekistics.

No prerequisite.

IE655 Value Engineering

Consideration of value analysis from the point of view of design, manufacturability, procurement, installation, and maintainability in order to optimize value in products.

Prerequisite: IE 602

IE663 Tooling Techniques I

A survey of advanced tooling techniques and metal forming theories, with emphasis on practical applications and economic analyses.

Prerequisites: IE 601, IE 602 and IE 607

IE664 Tooling Techniques II

Topics in contemporary tooling and metal forming research, including non-metallic and composite materials in modern manufactured products. Theories of bonding and cutting are analyzed and placed in a manufacturing perspective.

Prerequisites: IE 601, IE 602 and IE 607

IE681 Industrial Dynamics

A study of the behavior of firms and industries by computer simulation of their organizational structure and decision criteria.

Prerequisites: IE 621, IE 622 or BA 603 and BA 604

IE683 Systems Analysis

Techniques and philosophies defining the concept of systems analysis are presented in detail and illustrated with large-scale case studies. Diverse systems are analyzed covering the social urban industrial and military spheres. Techniques presented include utility theory, decision analysis, non-parametric and survey statistics, critical path methods, computer control and simulation, and technological forecasting.

Prerequisites: IE 601 or BA 603

IE685 Theory of Optimization

Nonlinear and dynamic programming with special reference to computer analysis of optimization problems.

Prerequisites: M 620 and IE 621, or BA 603 and BA 604

IE688 Seminar in Inferential Statistics

Computer applications in inferential statistical designs, including basic statistical tests and analysis of variance.

Prerequisite: Three credit hours of statistics.

IE689 Seminar in Descriptive Statistics

Computer applications in differential statistical designs. Topics include correlation analysis, multiple linear regression, nonlinear regression, and analysis of covariance.

Prerequisite: Three credit hours of statistics.

IE690 Seminar Project

Independent study under the guidance of an advisor into an area of mutual interest, such study terminating in a technical report of academic merit. Research may constitute a survey of a technical area in industrial engineering, operations research, or management science, or may involve the solution of an actual or hypothetical technical problem.

Prerequisite: Fifteen credit hours of coursework or by permission of the instructor.

Department of Mathematics

M610 Computational Mathematics

Review of algebra. Topics from calculas, including differentiation and integration methods, infinite series, and Taylor series. Linear algebra, systems of linear equations, and matrix methods.

Prerequisite: Six semester hours of calculus.

M620 Numerical Analysis

Introduction to optimization theory, including gradient, Newton-Raphson, and Fibonnacci methods. Construction and solution of differential-difference equations. Introduction to dynamic programming.

Prerequisite: M 610 or BA 604 or IE 607

Department of Mechanical Engineering

ME615 Adaptive Control Processes

Review of dynamics and of control, electrical, and mechanical analogies. Optimization and computerization of the control process.

Prerequisites: Advanced calculus, differential equations and dynamics.

ME620 Mathematical Models of Mechanical Systems

Formulation of physical problems in mathematical terms and solution of the resulting differential equations. Applications in fluid mechanics, vibrations, heat transfer, diffusion, and electricity. Electrical, mechanical, and thermal analogies are analyzed.

Prerequisites: Advanced calculus, and differential equations.

Department of Psychology

P619 Organizational Behavior

An analysis of various theories of business and managerial behavior emphasizing the business organization and its internal processes. Psychological factors in business and industry, including motivation, incentives, and conflict. A study of research findings relevant to an understanding and prediction of human behavior in organization.

P631 Social Psychology

Current problems in Social Psychology. Attitude scale construction, attitude change, language as a social phenomena, patterns of culture, social class, groups, person perception, and conformity.

P632 Group Dynamics and Group Treatment

An exploration of the emerging area of Group Dynamics. The structure of groups, their development, process interaction analysis, formal and informal groups, group psychotherapy and sensitivity training.

P633 Problems of Drug Abuse

Discussion of selected issues and current problems in drug abuse.

P634 Personality Assessment

A critical survey of the theories and issues of Personality Assessment. Among topics to be discussed are intelligence, achievement and ability assessment. Personality tests and ethical questions associated with psychological testing.

P636 Abnormal Psychology

Major personality theories and their implications.

P670 Psychology of Personality

An examination of the psychological and organic factors involved in personality training.

Department of Public Administration

PA600 Principles of Public Administration

The development, organization, functions, and problems of national, state, and local administration.

PA602 Public Policy Formulation and Implementation

The relationship between public administration and the formulation of public policies is studied. The implementation of public policies by administrators based on the politics of the administrator is examined in terms of interaction between various group representatives, i.e. the legislators, the politician, the pressure group leaders.

Prerequisite: PA 600

PA603 Resource Administration

Growth of the concept of conserving and developing natural resources and its translation into public policy. Organization of the interrelationships among the principal resources administration agencies; the coordination of resources program, national, state, and local.

Prerequisite: PA 602

PA604 Seminar in Communities and Social Change

Interaction between the community as a social organization and education, police, and welfare institutions within it; special attention to conceptual frameworks and current research or action programs that impact particularly on minority groups.

PA605 The Communication Process

Major emphasis on the role of communication in a democracy and the effects of communication content. Brief treatment of content analysis techniques, person-to-person communication, and barriers to the flow of communication.

PA620 Public Personnel Administration and Collective Bargaining in the Public Sector

Study of the civil service systems of the United States and the state governments, including a systematic review of the methods of recruitment, promotion, discipline, control, and removal.

Explores the effects on work relationships as a result of collective bargaining statutes which have been adopted by legislatures. Emphasis is placed on Connecticut's collective bargaining statutes.

PA625 Administrative Behavior

The problems faced by an administrator in dealing with interpersonal relationships and human processes. Analysis of individual and group behavior in various business settings to determine the administrative action for the promotion of desired work performance. Emphasis given to the public sector.

Participation in actual problem situation discussions and case studies.

PA630 Governmental Accounting

A comprehensive survey of the essential principles of governmental accounting, budgeting, cost accounting, and financial reporting. The various operating funds, bonded debt, fixed assets, investiments, classification of revenue and expenditures, general property taxes, and interfund relationships.

PA632 Public Finance and Budgeting

State and local expenditure patterns, state and local revenue sources, income taxation at the state and local level, excise taxation, sales taxation, taxation of capital, and the property tax. Emphasis on fiscal and economic aspects of federalism and federal-state fiscal coordination. The role of the budget in the determination of policy, in administrative integration, in control of government operations.

Prerequisite: PA 602

PA633 Financial Administration

Seminar on selected aspects of public financial administration including revenues, accounting, expenditures, public debt, special funds, and auditing.

Prerequisite: PA 630

PA634 Problems of Municipal Management

Study of selected problems of city management, with emphasis on "housekeeping" and line operations.

Prerequisite: PA 630

PA635 Statistics for Public Administrators

Provides a basic theoretical treatment of the nature of statistical analysis and its role in economic research design and procedure.

PA640 Purchasing

PA650 Administrative Law

A searching for principles and criteria against which public interest can be balanced with private right in the changing patterns of government, with particular reference to the American system.

Prerequisite: PA 600

PA651 Municipal Corporation

Nature of the municipal corporation embracing creation and dissolution legislative power over such corporations, extent of municipal powers, police power, zoning, power to contract, rights and remedies of creditors, power to issue evidence of indebtedness.

Prerequisite: PA 650

PA660 Urban Planning: Theory and Practice

Explores the concept of physical planning within the urban development framework. The function of planning in its relationship to the environment. Comprehensive planning with its many ramifications involving the various sections of our society. Methods for analyzing problems as well as design methods for problem solving.

Prerequisite: PA 602

PA661 Problems of Metropolitan Areas

Analysis of the problems of government and administration arising from the population patterns and physical and social structures of contemporary metropolitan communities.

Prerequisite: PA 660

PA662 Environmental Design

The basic problems necessary to an assesment of the quality levels of the environment based on geographic areas. Factors responsible for community development.

Prerequisite: PA 660

PA690 Research Project in Public Administration

Independent study for advanced graduate students on selected problems in public administration. May be repeated for credit.

Prerequisite: 21 graduate hours.

PA691 Research Methods in Public Administration

Designed to familiarize the administrator with the tools and potentialities of social research and to assist him in the presentation, interpretation, and application of research data.

Prerequisite: PA 600

PA692 Seminar in Public Opinion

Problems of identification and analysis of public opinion and its impact upon the political process. Problems of data collection and questionnaire construction; categorization of qualitative data, elements of scaling, logic of multivariate analysis; role of comparative and cross-national surveys of public opinion.

Prerequisite: PA 602

PA693 Public Administration Internship

A supervised work experience in a cooperating public service agency related to government.

Department of Political Science

PS601 Constitutional Law

A study of the relation of the judicial process and constitutional law to the political process in the United States. Judicial review, federalism, and separation and delegation of powers.

PS602 Civil Liberties and Rights

An analysis of civil liberties, civil rights, due process, and equal protection of the law. An examination of the role of the public official in the protection, denial, or abridgement of the constitutional and legal rights of individuals.

PS604 Political Parties

A historical and functional analysis of the operation of the American Party system with special reference to interest groups, public opinion, electoral behavior, and proposals for reorganization of the existing party system.

PS605 Criminal Law

Scope, purpose, definition, and classification of criminal law. Offenses against the person habitation, and occupancy. Offenses against property and other offenses. Special defenses. Emphasis on the Connecticut penal code.

PS608 The Legislative Process

The role of the legislature in modern American Government at the State and National level, theories of representation, the relationship of electors and apportionment to the law making process, the veto power, the committee system, seniority rules, and Constitutional limitations, as well as the interest group phenomenon.

PS616 Urban Government and Politics

An examination of the historical structures and processes of urban metropolitan government with special emphasis on conflict and cooperative factors.

SS600 Minority Group Relations

An interdisciplinary survey of minority groups in the United States with special reference to ethnic, religious, and racial factors that influence interaction.

SS604 Seminar in Communities and Social Change

Interaction between the community as a social organization and education, police, and welfare institutions within the community. Emphasis on concepts and current research or action programs that have a particular impact on minority groups.

SS605 Culture and Personality

The effect of different cultures upon personality development. Cultural mores and norms as vehicles of control.

SS607 Delinquency and Juvenile Crime

A general introduction to the field of delinquency and crime, including all aspects of the social and personal matrix out of which these forms of social destructiveness arise.

SS608 Criminology

A survey of the available data and theories relating to the scope and nature of the crime problem, characteristics of the offenders, and the factors that are correlated with crime. Emphasis on social institutions that play significant roles in the increase or decrease of criminal activity as it exists in the United States and other cultures. Environmental and personality factors that influence criminal behavior.

SS609 Comparative Social Organization

A comparative analysis of social and political organizations in cultures of varying complexity.

SS610 Urban Sociology

The problem of urban growth and development. Residential patterns together with the physical development of cities and the redevelopment plans. An examination of the people and their relationships to the environment.

Prerequisite: PA 604

SS631 Population Problems and Human Ecology

A sociological approach to social demography with attention on population growth, patterns of distribution of population, and population changes and trends.

SS635 Sociology of Law

A study of the social origins and consequences of law and legal processes. Emphasis on problems of legal change and the structure and functioning of legal sanctions. Emphasis on law and legal sanction in other societies, including primitive societies. Major focus on American society.

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